DOCKET FILE COPY ORIGINAL

DOCKET FILE COPY ORIGINAL

RECEIVED - FCC

NOV 2 0 2002

Federal Communication Commission
Bureau/Office

KURTIS & ASSOCIATES, P.C.

SUITE 200
1000 POTOMAC STREET, N.W.
WASHINGTON, D.C. 20007

Hand Delivery
Ms. Jennifer Tomchin
Policy Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., Room 3-C224
Washington, D.C. 20554

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
	)	
Petition Pursuant to 47 U.S.C.§160(c)	)	**WT Docket No. _____**
For Forbearance From E911	)	
Accuracy Standards in Section 20.18(h)	)	
of the Commission's Rules	)	

PETITION PURSUANT TO 47 U.S.C. §160(c) FOR FORBEARANCE FROM E911 ACCURACY STANDARDS IMPOSED ON TIER III CARRIERS FOR LOCATING WIRELESS SUBSCRIBERS UNDER RULE SECTION 20.18(h)

Respectfully submitted,

THE TIER III COALITION FOR WIRELESS E911

Michael K. Kurtis
Jerome K. Blask
Their Attorneys

Kurtis & Associates, PC
1000 Potomac Street, NW
Suite 200
Washington, DC 20007
(202) 328-4500

November 20, 2002

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
	)	
Petition Pursuant to 47 U.S.C. §160(c)	)	WT Docket No. _____
For Forbearance From E911	)	
Accuracy Standards in Section 20.18(h)	)	
of the Commission's Rules	)	

PETITION PURSUANT TO 47 U.S.C. §160(c) FOR FORBEARANCE FROM E911 ACCURACY STANDARDS IMPOSED ON TIER III CARRIERS FOR LOCATING WIRELESS SUBSCRIBERS UNDER RULE SECTION 20.18(h)

Respectfully submitted.

THE TIER III COALITION FOR WIRELESS E911

Michael K. Kurtis
Jerome K. Blask
Their Attorneys

Kurtis & Associates, PC
1000 Potomac Street. NW
Suite 200
Washington, DC 20007
(202) 325-4500

November 20,3002

TABLE OF CONTENTS

TABLE OF CONTENTS

SUMMARY

The Tier III Coalition for Wireless E911 hereby petitions the Commission to forbear From enforcing the quantitative accuracy standards set forth in Section 20.18(h)(1) and (2) of the Rules with respect to Tier III carriers operating in their Commission-licensed service areas. Forbearance is requested for a limited period. up to and including December 31, 2005. Assuming forbearance is granted. Ticr III carriers will still he obligated to comply with the bulk of their E911 obligations, such as selecting. ordering, installing and optimizing Phase II technical solutions within six months of a PSAP request or by September 1, 2003. whichever occurs later.

No commercially available Phase 11-compliant E911 location system (network or handset hascd). in existence today, has been identified that can be economically deployed and satisfy Section 20.18(h) accuracy standards throughout a licensed rural service area. Moreover. there is no record support for imposing the same quantitative accuracy standards derived for a dense urban area on a sparsely-populated Tier III rural area where a 911 caller can be physically located more quickly notwithstanding a more flexible accuracy requiremcnt. Accordingly, this petition asks that the Commission forbear from enforcing Section 20.18(h) accuracy standards in rural areas served by Tier III carriers.

If forbearance is granted, Tier III carriers can deploy network-based Phase II solutions within their FCC-authonzed coverage areas from presently existing transmitting facilities, utilizing existing cell site antenna configurations. Alternatively, for Tier III cainers utilizing a digital technology for which ALI-capable handsets are available and who deploy handset-based solutions, no further enhancements to that handset-based solution will be required in order to increase the resulting

accuracy levels. For either deployment. thc Cornmission will deem the resulting accuracy levels compliant, even if they fall outside the parameters set forth in Section 20.18(h).

During the forbearance period. interested parties (carriers, equipment vendors, PSAPs, the Commission and other experts) will work to overcome the multiple issues that continue to vex Phase II solutions in the smallest, rural markets served by Ticr III carriers. As these matters are resolved, E91 I accuracy and reliability in Tier III markets can beexpected toimprove. Atthesame time. these interested parties will be able *to* ascertain the locational accuracy levels (hat can be economically attained for both network and handser-based technologies in "real world' deployments in rural applications. Finally, "real world" information can be gathered to enable the Commission to actually determine the accuracy levels that arc truly required to meet the public safety need in these demographically-distinctive areas.

Approximately one year ago, the Commission appointed Mr. Dale Hatfield, a former FCC official, to investigate the multiple implementation issues attending provisioning of wireless E9l 1 service. Mr. Hatfield's Report, which was filed with the Commission in October 2002, confirms that technological, operational and other factors involved in implementing Phase II E91 l solutions will impede compliance with Section 20.18(h) requirements. particularly in Tier III service areas. In the next to last paragraph *of* his report. Mr. Hatfield agrees "with the notion that additional flexibility— rather than rigid rules— may, in some cases at least, actually facilitate the roll out of wireless E91 I services."

As the foregoing demonstrates. thc instant forbearance petition is specific, focused and limited in scope, and shows a path to full compliance, although those benchmark requirements were imposed by the Commission on parties seeking waiver relief from E91I Phase II requirements under

Section 1.925 of the Commission's Rules. The legal hurdle for ohtaining forbearance relief under Scction 10 of the Communications Act is considerably lower than that imposed on waiver petitioners under Section 1.925 of the Commission's Rules. Regarding the criteria set forth in Section 10 of the Communications Act. petitioners show that strict application of Section 20.18(h) to Tier III carriers is unnecessary to ensure that their charges, practices, classifications, *etc*. are just. reasonable and non-discriminatory. Nor is srrict enforcement of Section 20.18(h) necessary to protect consumers: moreover, forbearing from that enforcement will encourage competition in the relevantservice markets. The limited forbearance from Section 20.18(h) enforcement requested here is. therefore, decidedly in the public interest and should be granted.

Before the
FEDERAL COMMUN[CATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
	)	
Petition Pursuant to47 U.S.C. §160(c)	)	WT Docket No. _____
For Forbearance From E911	)	
Accuracy Standards in Section 20.18(h)	)	
of the Commission's Rules	)	

PETITION PURSUANT TO 47 U.S.C. §160(c) FOR FORBEARANCE FROM E911 ACCURACY STANDARDS IMPOSED ON TIER III CARRIERS FOR LOCATING WIRELESS SUBSCRIBERS UNDER RULE SECTION 20.18(h)

The Tier III Coalition for Wireless E911 ("TierIIICo") hereby petitions the Federal Communications Commission ("Commission" or "FCC") to forbear from enforcing the accuracy and reliability standards set forth in Section 20.18(h) of the Commission's Rules with respect to Commercial Mobile Radio Service ("CMRS") provided by Tier III wireless camers in their respective service areas.[1/] Significantly, TierIIICo seeks relief only from the strict quantitative requirements imposed by Section 20.18(h)(1) and (2) on Tier III carriers providing service in their licensed service areas[2/] and does ***not*** seek to delay the deployment oflocation identifying E911 Phase II technologies as those deployment requirements are triggered by local Public Service Answering Point ("PSAP"s). Moreover, TierIIICo seeks forbearance only for a limited period, up to and

---

1/ This petition is filed in accordance with Section 10 of the Communications Act, as amended by the Telecommunications Act of 1996 ("Telecom Act" or the "Act"): 47 U.S.C. § 160, and Section 1.53 of the Commission's Rules. TierIIICo is a group of Tier III carriers who *seek* relief From the accuracy standards in Section 20.18(h) of the Rules. TierIIICo's constituent camers are listed in Appendix A hereto.

2/ To the extent the grounds forforbearance presented here also apply to Tier I and Tier II carriers with respect to their rural operations. the relief sought herein could equally apply to such large camers with respect to [heir rural deployments.

including December 31, 2005, to allow sufficient time for the collection ofmeaningful accuracy and reliability information to enable all parties to learn, with certainty, the economically attainable level of location accuracy for both network and handset-based technologies in the real world deployment in rural environments. Again, TierIIICo seeks *no* relief with respect to the otherobligations imposed by Section 20.18.

If this petition is granted, Tier III camers will continue their efforts to implement Phase II E911 service and comply with the deadlines set forth in Section 20.18(f) and (g), as recently modified by the Commission.[3/] Forbearance from application of Section 20.18(h) means only that Tier III camers will be insulated from enforcement action if, at least initially, they are unable to achieve the precise accuracy levels now dictated by Section 20.18(h).[4/] As shown below. the limited rcgularory forbearance proposed here satisfies all relevant statutory and agency srandards and should be granted

I. BACKGROUND

In its very first sentence. the Communications Act stales that the Commission's regulatory objective is, *inter alia*. to make available a rapid. efficient nationwide and global wire and radio

---

3/ Revision Of The Commission's Rules To Ensure Compatibility With Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102 (Order To Stay), 17 FCC Rcd 14841 (2002), (hereinafter "*Phase II Stay Order*"); *see* "Wireless Telecommunications Bureau Seeks Comment On Petitions For Reconsideration Regarding Order To Stay E911 Phase II Rules For Small Camers." Public Notice in CC Docket No. 94-102, DA 02-2285, released September 16, 2002.

4/ Section 20.18(h) presently requires all camers to provide to the designated Public Safety Answering Point ("PSAP") the location of all 911 calls subject to the following quantitative standards for location accuracy and reliability: for carriers deploying network-based technologies, 100 meters tor 67 per cent of calls and 300 meters for 95 per cent of calls: for camers deploying handset-based technologies, 50 meters for67 percentofcalls and 150 meters for 95 percent ofcalls.

communication service "for the purpose of promoting safety of life and property."[5] Consistent with that unambiguous statutory puipose. the Cornmission initiated a rulemaking in October 1994 designed to achieve major improvements in the quality and reliability of 911 and enhanced 911 services available Io customers of cellular, broadband personal communications systems ("PCS") and certain Specialized Mobile Radio licensees. The subject docket— Revision of the Commission's Rules To Ensure Compatibility with Enhanced91 1Emergency Calling Systems, CC Docket No. 94-102— has been open and active throughout the past eight years during which time the Commission sought to realize improved wireless E91 Icapability and thereby promote safety of life and property in this nation.

The Commission's first ordei- in the Enhanced 911 Emergency Calling Systems docket adopted initial wireless E911 rules that established implementation schedules for both Phase I and Phase II E911. and required PSAPs to expressly request that wireless camers implement Phase I and Phase II to induce the latter's deployment obligations.[6] Under theinitial rule. wireless camers were obligated to provide requesting PSAPs with the longitude and latittideofall 911 calls within aradius of 125 meters (using root mean square techniques) beginning October I, 2001.[7] Significantly, the

---

[5] 47 U.S.C. § 151

[6] Revision Of The Commission's Rules To Ensure Compatibility With Enhanced91 1 Emergency Calling Svstems, CC Docket No. 94-102 (Report and Order and Further Notice of Proposed Rulemaking), 11 FCC Rcd 18676 (1996) (hereinafter ***"First R&O"***)

[7] *Id.* On reconsideration, the Commission amended the rule to clarify that licensees subject to the requirement had to provide the PSAP the longitude and latitude of all 911 calls at an accuracy level of 125 meters or less using root mean square technology. As a result. there would be roughly a 67 to 75 percent probability that the reported location would be within 125 meters of the 911 caller's actual location. Revision *Of* The Commission's Rules To Ensure Compatibility With Enhanced 911 Emergency Calling Svstems, CC Docket No. 94-102 (Memorandum Opinion and

(continued...)

Commission acknowledged that the costs associated with deployment of these location technologies, especially in a rural environment, would be prohibitive.[8] Accordingly, the Commission expressly conditioned the obligation of rural deployment on prior establishment of a meaningful cost-recovery mechanism. When cost-recovery mechanism failed to develop commensurately with the perceived need for the service, the Commission diopped the prior cost-recovery mechanism condition. opting instead for a "cost recovery by m y allowable means" standard. Unfortunately, for rural camers with limited subscriber bases. no meaningful method to recover the high cost of system deployment exists

When initial wireless E911 rules were adopted. there was a general consensus that wireless carriers would use network-based technologies to provide Phase II E911. Technological advances indicating potential availability of handset-based Phase II solutions. however. caused the Commission in 1999 to revise its wireless E911 rules to reflect that development. and to establish separate accuracy and implementation scheduler for handset-based and network-based technologies.[9] Thus. in the *Third R&O*. the Commission acknowledged (¶ 33) that there was no perfect automatic

---

[7] (...continued)
Order). 12 FCC Rcd 22665, 31726 (1997) (hereinafter "*First MO&O*")

[8] "No party disputes the fundamental notion that camers must be able to recover their costs of providing E911 services." *Id.* at ¶ 89.

[9] Revision Of The Cornmission's Rules To Ensure Compatibilitv With Enhanced 911 Emergency Calling Systems, CC Docket No. 94- 102 (Third Report and Order), 14 FCC Rcd 17388 (1999) (hereinafter "**Third** *R&O*"). At about the time the **Third** *R&O* became public. Congress ratified the Commission's efforts to accelerate E911 availability by enacting the Wireless Communications and Public Safety Act of 1999 (Pub. L. No. 106-81, enacted Oct. 26, 1999). This law was designed to enhance public safety by facilitating prompt deployment of a seamless communications infrastructure. including wireless technology, for nationwide emergency services.

location identification ("ALI") solution and, in that context, "the public interest and public safety will best bc served by allowing a broad range of technologies, including handset-basedopportunities, a reasonable opportunity to compete in providing 911 ALI." For that reason. the Commission revised the handset implementation schedule by requiring handset-based Phase II camers. without regard to any PSAP request for Phase II capability. to begin selling ALI-capable handsets (whether new. modified or upgraded) no later than March 1, 2001, and to ensure that at least 50 per cent of all handsets activated were ALI-capable by October 1, 2001 and at least 95 per cent of activations were ALI-capable by October 1. 2002.[10/] Upon receipt of a PSAP request, the carrier. either within six months of the request or by October 1, 7-001. whichever was later, was to insure that 100 percent of all new handsets activated were ALI-capable. Within two years of such a request or by December 31, 3004. whichever was later. wireless carriers deploying handset technology had to "undertake reasonable efforts to achieve 100 percent penetration of ALI-capable handsets" in their overall subscriher base.

Regarding network-based Phase II solutions. the *Third R&O* (¶ 72) replaced the root mean square reliability methodology with a "dual ring" standard requiring accuracy wirhin 100 meters of the calling party's actual location for 67 per cent ofcalls. and 300 meters for95 percent of calls. [11/]

[10/] In contrast to the deadlines imposed on camers relying on a handset-based solution. the phase-in of network-based location technology mandated by the ***Third*** *R&O* depended on a PSAP request. unless that request was received before April 1, 2001. Carriers deploying network-based infrastructure were required to provide Phase II 911 enhanced service to at least 50 per cent of their coverage area or 50 per cent ofthe their population beginning October 1. 2001 or within six months of a PSAP request, whichever occurred later. That obligation expanded to 100 per cent (of coverage area or population) within eighteen months of such a request or October 1,2002,whichever occurred later. *Third R&O*. Appendix B, Final Rules: Section 20.18(f).

[11/] The corresponding handset based accuracy standard was fixed at 50 meters/67 (continued...)

The Commission devised and promulgated the outer nng, 300 meter standard because

> network-basedsolulionsmaynot always be able to provide the higher level of accuracy, *especially in rural areas*. The 300 meter level of accuracy should nonerheless provide a *very useful* indication of location. particularly in those rural areas.[12/]

Approximately two years ago, responding to petitions seeking reconsideration of the *Third R&O* because the handset-based deployment schedule therein was too aggressive. the Commission again revamped the relevant milestones for implementing handset-based technology.[13/] Specifically, the phase-in requirements precipitated by a PSAP request were eliminated. and the general deadlines were relaxed. Carriers relying on handset rechnology were required to begin selling ALI-capable handsers by October I. 700I. By December 31. 2001, at least 25 per cent of all newly-activated handsets were to be ALI capable; by June 30, 2002, 50 percent; and by December 31, 2002, 100 per cent.[14/] Rather than require handset-deploying wireless carriers *to* implement "reasonable efforts to achieve 100 percent penetration of ALI-capable handsets" in their subscriber base by December 31, 2004. the *Fourth MO&O* extended the deadline to December 31,2005and. to reduce uncertainty,

---

[11/](...continued)
percent and 150 meters/95 per cent *Id.* (¶ 74.) The Commission purposely imposed a more stnngcnt accuracy standard for handset-based tcchnology: (a) to account for increasing locational accuracy realized in its testing; and (b) to offset the delay attending the need to phase-in handset solutions over rime, as new or upgraded handsets replace the embedded base of non-capable E911 handsets. *Id.* (¶¶ 73-74).

[12/] *Id.* (¶ 72) (emphasis added).

[13/] *Revision of the Commission's Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems,* CC Docket No. 94-102 (Fourth Memorandum Opinion and Order), 15 FCC Rcd 17442 (2000), (hereinafter "*Fourth MO&O*").

[14/] *Id.*, ¶¶ 33-37

substituted a mandatory 95 per cent penetration level lor the "reasonable efforts" to achieve 100 per cent penetration found in the *Third R&O*

Certain parties to the *Third R&O* reconsideration proceeding advocated uniform Phase II accuracy standards. irrespective of technology deployed. because disparate standards for network- versus handsel-based technology "serve no logical public satety purpose and destroy competitive neutrality."[15] Concluding that E911's contribution to overall public safety entails more than considerations of accuracy alone, the Commission rejected the proposal:

> Accuracy is *only one* of several means by which location technologies contrihure to public safety. The rate and extent of deployment, reliability, encouragement of further improvements, and cost are other relevant factors. Moreover, a rule that is ostensibly neutral on its face may in fact favor one rechnology and preclude another. however valuable to public safety.'"

The Commission then stressed that its paramount objective in imposing E911 regulations is public safety. To realize that objective, fair and open competition among rival E911 technologies is encouraged. Although accuracy is one element in judging this cornpetition, there are others. all of which are relevant to improving public safety.[17]

As indicated above. the first E911 accuracy. reliability, deployment and coverage rules were promulgated in 1996. From that time until issuance of the *Fourth R&O* in September 2000, these regulations have been revised, amended and revamped on numerous occasions. Only several months

---

[15] *Id.*, ¶ 39

[16] *Id.*, ¶ 40 (emphasis added').

[17] *Id.* ¶ 85.

ago, in the *Phase II Stay Order*.[18] the Commission found it necessary again to defer its recently established compliance deadlines for both handset- and network-based Phase II technologies. This deferral applied only to non-nationwide CMRS cainers, which were further classified into two groups. Tier II and Tier III, based on size. Regarding Tier III camers, the subject of this petition. the *Phase II Stay Order* extended the intenm handset and network upgrade compliance deadlines by thirteen months.

Even with the latest delay. rural carriers continue to tace significant costs to deploy Phase II E911 systems whose technologies remain unproven, in rural applications, in their ability to meet a defined accuracy standard that may ultimately prove both unattainable and unnecessary in meeting the public satety goals of the E911 rules. If rural camers were to expend significant limited resources toward achieving E911 Phase II compliance. fail nevertheless to meet the Commission's accuracy standards. and ultimately still need to seek universal waiver relief from the agency, the waste of limited resources in a failed effort and its impact on the small rural camer would be profound. Indeed. absent the type of relief sought here. camel-s are at a total loss to know how much money must be spent on the failing proposition to try and meet an unattainable accuracy standard before sufficient justification can be made to obtain a waiver. The potential waste of scarce carrier resources would be only further amplified if, after having spent significantly more money in a failed effort to meet accuracy requireinents which still prove unachievable, it is ultimately concluded, from "real world" rural experience for reasons discussed below (and as TierIIICo expects), that an accuracy standard far less rigorous than the standard codified in Section 20.18(h) of the Rules,

---

[18] Revision Of The Commission's Rules To Ensure Compatibility With Enhanced911 Emergency Calling Svstems, CC Docket No. 94-102 (Order To Stay), 2002 FCC LEXJS 3638, FCC 02-210 (2002) ("*Phase II Stay Order*").

enabled more rapid location of a wireless 911 caller in a rural environment than resulted from the strict application of the defined standard in an urban setting

Therein lies the heart of the problem. E911 solutions. both handset and network-based. remain untested in true rural applications. Equally undocumented is the actual need tor the same stringent urban standard in an open. rural environment. TierIIICo submits that locating a stranded subscriber to within 1000 feet in an open rural setting may prove every bit as effective in actually locating the subscriber, for far less cost. When coupled with the fact that it may never be cconornically possible to achieve a higher. but unneeded level of accuracy, the basis for the limited forbearance sought herein brcomes readily apparent.

II. THE FORBEARANCE STANDARD

The Communications Act requires forbearancc from the quantitative accuracy requirements imposed by Scction 20.18(h)(1) and (2) of the Commission's Rules where Section 10 of the Act's standards are satisfied. Section 10.17 U.S.C. § 160. directs the FCC to forbear from applying any regularion or any statutory provision to a telecommunications camer or a telecommunications service (or class of camers or services) if the Commission finds that:

1. enforcement of such regulation or provision is not necessary to ensure that the charges. practices. classifications, or regulations by, for, or in connection with that carrier or service are just and reasonable, and are not unjustly or unreasonably discnminatorv;

2. enforcement of such regularion or provision is not necessary for the protection of consumers: and

3. forbearance from applying such regulation or provision is consistent with the public interest; in making this determination, the Commission must consider whether forbearing from enforcing the regulation will promotecompetitive market conditions.

including the extent to which such forbearance will enhance competition among service providers.[19]

Although prior forbearance petition decisions by the Commission may have avoided or obscured the issue. Section 10(a) requires the Commission to justify continued enforcement of a regulation from which relief is sought.[20] Absent express Commission action denying a forbearance petition. Section 10(c) compels its grant. As a result, *grant of* a forbearance petition is the default outcome: if it wishes to deny the petition and enforce the regulation, the Commission must demonstrate that the specific requirements stated in 10(a)(1), (a)(2) or (a)(3) have not been met. Absent such a showing by the Commission, the forbearance petition must be granted. [21]

As the foregoing analysis signifies, the legal requirements imposed by Congress under Section 10 of the Communications Act on forbearance petitions differ materially from those imposed by the Commission under Section 1.925 of its Rules on waiverrequests. The latter require the waiver proponent to demonstrate either: (a) that the rule's underlying purpose would be frustrated or disserved hy its instant application and that the waiver serves the public interest: or (b) that the rule's application, clue to unique or unusual circumstances, would be inequitable. unduly hurdensome or contrary to the public interest, or that the party seeking the waiver has no reasonable alternative.

Thus. the waiver proponent has the burden of satisfying relatively broad and arguably discretionary standards — that enforcing the rule will frustrate or dis-serve its underlying purpose,

---

[19] *See* 47 U.S.C.§160(b)

[20] Verizon Wireless's Petition for Partial Forbearance from the Commercial Mobile Radio Services Number Portability Obligation and Telephone Number Portability, 27 CR 331, 346-348 (2002); separate statement of Commissioner Martin, approving in part and dissenting in part.

[21] *Id.*

or that unusual factual circumstances make the rule's application inequitable or unduly burdensome. By contrast. the Section 10 petitioner need show only that the subject rule is "not necessary" to ensure that a camer's charges. practices and classifications are just. reasonable and non-discriminatory, nor is it necessary to protect consumers. and that forbearance is generally pro-competitive. Moreover, denying the proposed waiver is the default outcome under 1.925,the polar opposire of the result under Scction 10. A waiver denial will be upheld on judicial review unless a rejected petitioner can demonstrate that the Commission's reasons for denying the request are "so insubstantial as to render the denial an abuse of discretion," an admittedly "heavy" burden."'

The legal hurdle faced by the forbearance petitioner under Section 10 is, therefore. considerably lower than that faced by the waiver petitioner under Section 1.925. This distinction is significant here because the *Phase If Stay* **Order** (at ¶ 41) held that it was premature. with one exception, to grant any additional relief from accuracy requirements and denied "all petitions for waiver of the accuracy standard" (emphasis added). The instant request seeks relief under the more flexible and less exacting forbearance standard and must bc considered in that context.[22/]

In the past. the Commission has denied forbearance petitions upon determining that one or more prongs of Section 10's tripartite test were not satisfied. Regarding the instant request to forbear from Section 20.18(h)'s accuracy and reliability standards in Tier III service areas, lor a limited and

---

[22/] Green Countrv Mobilephone. Inc. v. FCC. 765 F. 2d 235, 238 (D.C. Cir. 1985), quoting Thomas Radio Co v. FCC. 716 F.2d 921.924 (D.C.Cir. 1983).

[23/] Although the operative standards for forbearance and waiver petitions are indisputably distinct, the instant petition heeds the Commission's advice that future requests from, *inter alia*, rural camers are "specific. focused and limited in scope, and [show] a clear path to full compliance." *Fourth MO&O*, 15 FCC Rcd 17442). In this respect, the instant petition exceeds Scction 10 requirements for a forbearance petition.

specific period of time in order to enable the Commission to realistically determine both the achievability and need for the higher standards in the rural environment. all relevant aspects of Section 10 are readily fulfilled.

Finally. TierIIICo submits that forbearance fora limited period of time is farpreferable, from a regulatory standpoint. than forcing the Commission *to* consider what must amount to nothing short of a blanket waiver of the accuracy requirements in the event that they are unachievable in the rural "real world." Accordingly. the relief sought here *is* in the public interest and should be granted by the Commission. Since the Commission has determined that waiver requests are premature, rural carriers. with limited access to financial resources, are faced with the paradox of having to spend funds toward a goal that may not be achievable, only to be faced with ultimately still requiring the waiver. after wasting many times the amount of resources needed to provide a level of accuracy that satisfies emergency needs in the rural "real world."

TierIIICo has been unable to find a network based solution vendor that will guaranty the ability to meet the FCC accuracy requirements without the need to deploy significantly mor-e cell sites for location-only purposes. many of which will need to be placed outside of the rural carrier's licensed service area. in combination with more costly antenna systems at existing sites. Similarly, handset-based solutions, which require visual sighting to GPS satellites. and absent that sighting, assistance *from* the network, also provide no guaranty of compliance. The current position of facing possible entorcement actions regardless of the technical ability to achieve the requisite accuracy rcquircments. creates a regulatory environment where rural carriers are facing virtually unlimited financial exposure by not knowing how far they have to go in their efforts to comply with a level of accuracy that. by all indications. cannot be economically achieved with today's technology in the

rural application. This risk is having an adverse impact on the continued availability of funding for ongoing network upgrades and expansions for non-E911 needs and threatens the continued competitive existence of the rural carriers.

III. MULTIPLE TECHNICAL, OPERATIONAL AND PRACTICAL CONCERNS PRECLUDE TIER III CARRIERS FROM STRICTLY COMPLYING WITH SECTION 20.18(h) ACCURACY REQUIREMENTS

Subjecting Tier III carriers to strict enforcement of the accuracy and reliability standards codified in Section 20.18(h) of the Commission's Rules is unlikely to promote public safety and may indeed be inimical to it. As already shown, in initiating the Enhanced 911 Emergency Calling Systems docket. the Commission was attempting to fulfill the Communication Act's directive to make available a nationwide communications service "for the purpose of promoting safety of life and property."[24/] TierIIICo respectfully submits that rigid enforcement of Section 20.18(h)'s exacting standards against Tier III carriers in the short-term will be inconsistent with the Commission'.; policy objective of enhancing public safety — a particularly adverse outcome in the post-Szptember 11 environment where safety and security have become paramount national concerns.

The Commission has stated that accuracy is only one criteria by which to measure wireless E911's contribution to public safety. Other important considerations include reliability, cost and extent of deployment. If strict adherence to Section 20.18(h)'s accuracy standards were to reduce reliability and extent of deployment, while subsrantially inflating costs. the ramifications for public safety would he profoundly negative. Enforcing Section 20.18(h) against Tier III carriers is.

24/ 47 U.S.C. § 151

however, likely to have this perverse outcome because of the considerable technical. operational. practical and strategic concerns that implementing Phase II technology, both network and handset-based, in the physical environment served by Tier III carriers presents.

The Commission has long been aware of the multiple implementation issues attending the provisioning of wireless E911 service. Almost one year ago, a former Chief of the Office of Engineering and Technology. Mr. Dale Hatfield. was commissioned toconduct an inquiry assessing these issues and theireffect on wireless E911 deployment." That inquiry culminated in a report (the "*Hatfield Report*"), which was filed with the Commission on October 15, 2002 and which corroborates that technological. operational and other factors involved in implementing Phase II E911 technology will impede compliance with Section 20.18(h) requirements, particularly in Tier III service areas.[26] In the *Hatfield Report*'s penultimate paragraph. the informed and unbiased expert designated by the Commission notes his agreement "with the notion that additional flexibility— rather than rigid rules— may, in some cases at least. actually facilitate the roll out of wireless E911 services."[27]

A. NETWORK-BASED PHASE II TECHNOLOGY

The difficulty of achieving Section 20.18(h) accuracy and reliability in rural settings is well-documented in the Enhanced 911 Emergency Calling Systems docket and by the *Hatfield Report*

---

[25] "FCC Announces Dale Hatfield to Lead Inquiry of Technical and Operational Issues Affecting Deployment of Wireless Enhanced 911 Services," News Release, rel. Nov. 30. 2001.

[26] "Wireless Telecommunications Bureau Seeks Comment On Report On Technical And Operational Wireless E911 Issues, WT Docket No. 02-46," Public Notice, DA 02-2666. rel. Oct. 16. *1002*. announcing filing ot "Report on Technical and Operational Issues Impacting the Provision of Wireless Enhanced 911 Services." by Dale N. Hatfield (hereinafter "*Hatfield Report*").

[27] *Hatfield Report*. p. 45

Rural wireless systems confront coverage and other technical challenges that are substantially different from their counterparts that serve urban, suburban and even ex-urban locales. The unique configuration of rural systems. coupled with terrain characteristics and other environmental features of these areas. substantially complicates the triangulation process on which network-based technology depends.

To maximize coverage in vast rural areas. Tier III camers attempt to deploy wide-spaced omnidirectional cells with minimal overlap among reliable service contours; although the degree of overlap suffices to providequality CMRS service, it is inadequate for triangulating a mobile position throughout the coverage area as network-based technology requires. Rural networks are frequently designed to cover a highway traversing an unpopulated or sparsely populated area; as a result, base stations are located "in a ribbon or 'string of pearls' configuration that makes triangulation difficult."[28/] Triangulation is further impeded where the mobile initiating a "911" call is at the perimeter of a Tier III service area. or where hills or other terrain features preclude signal reception from mor-e than one base station.[29/]

Theoretically, some of these issues might be solved by adding base stations and other network elements. Because this infrastructure will generate minimal if any incremental revenue (see *infra* Section IV.B.1), the associated capital and operating costs will have to be recouped entirely from existing local subscribers. The comparatively low subscriber levels associated with Tier III systems implies that recovering these costs will impose a crushing burden on a small number of users. Moreover. implementing network-based Phase II solutions in even the most hospitable

---

[28/] *Hatfield Report*, p. 12.

[29/] *Third R&O*, ¶ 23.

geographic setting requires installing additional equipment at each existing base station. a substantial investment that must also be recovered.[30]

Cost is as important as accuracy in evaluating the contributions that wireless E911, in general, and Phase II E911, in particular, make to public safety. A Tier III carrier seeking torecover the costs of achieving Section 20.18(h) accuracy in truly rural systems in any reasonable time frame could reasonably saddle consumers with intolerable financial burdens. forcing them to discontinue service or substitute a less expensive form of service. which lacks E911 capability (*e.g.*, paging or non-interconnected dispatch). To minimize this prospect, Tier III carriers could reduce the rate and extent otdeployment. or utilize unreliable or unproven vendors. *etc.*, alternatives which themselves would still require waivers of the Commission's Phase II Rules. These outcomes, the product of rigidly applying an exacting accuracy standard in rural environs. will diminish rather than enhance the safety of life and pi-opeity — the antithesis of the Commission's policy objective in the Enhanced 911 Emergency Calling Systems docket. In sharp contrast. the limitedforbearancesought heiein will hastcri deployment of an E911 Phase 11 solution which. while possibly below the Section 20.18(h) standard throughout the rural market, will most likely provide an acceptable level of accuracy in the more open, rural areas served by Tier III carriers.

Even if these formidable problems were to instantly disappear, Tier III camers face practical obstacles to Section 20.18(h) compliance that by themselves justify forbearance from enforcing that rule provision. As the Commission acknowledged. network-bascd location technology vendors afford priority to Tier I (nationwide) cainers, thereby causing -'downstream delays" for Tier II and

---

[30] *Id*

Tier III operators.[31] Because Tier III (and, to a lesser extent. Tier 11) carriers are at ihe end of the distribution line. they will be the last to receive technical expertise and network equipment from tcchnology vendors.[32] For this reason. the Commission determined that the three carrier tiers should commence Phase II rollout at different times, with Tier III corning last."[33] Again. the forbearance requested herein proposes ***no*** additional deferral in deploying Phase II solutions; rather the forbearance sought by TierIIICo will result in a more rational and economic deployment of these solutions.

Section 20.18(h) requires Tier III carriers to provide the accuracy level stated therein on an essentially uniform basis throughout a rural service territory. This expectation is unrealistic because it ignores the demographic variability of rural areas and the design and economic constraints that carriers face in accommodating these non-uniform demand characteristics. Thus. in areas where important traffic arteries converge and where population density is relatively high. carriers typically deploy higher concentrations of cell sites. In these areas, a carrier may well actually achieve or approach achieving Section 20.18(h) locational accuracy.

In more remote portions of a market. and especially where a rural coverage area approaches a cellular or PCS market boundary. the accuracy level achievable from a network-based systcrn will decline. Offsetting this reduced accuracy. however. is the more rapid availability of a network-based

---

[31] *Phase II Stay Order*. ¶ 11. "Based on this record, we conclude that handset vendors and network-based location technology vendors give priority to the larger. nationwide camers." *Id.*, ¶ 11

[32] *Id.*. ¶ 12

[33] *Id.*

deployment. Unlike a potentially more accurate handset-based solution. network-based technology can be immediately utilized by all system users, analog or digital, subscriber or roamer

Appended hereto as Appendix B is a copy of an ex *parte* filing made by TruePosition, Inc. on July **24.** 2000 substantiating the toregoing analysis.[34/] In that filing, TruePosition urged a similar result:

> ...the FCC could encourage more rapid deployment of location systems in rural areas by providing flexible deployment standards that are based upon the carrier's existing choice of cell site locations, cell site antennas. etc. TruePosition believes that in pure I-to-1 overlay scenarios. where TruePosition receivers are connected only to existing antennas at existing cell sites, system accuracy of 250 meters (67%) in rural environments can be readily achieved. A pure I-to-1 overlay scenario is generally the least cost and fastest means to a deployment of location services. In order to improve the accuracy in rural areas. more sophisticated and more costly design approaches would be required.[35/]

While. admittedly, the Commission accuracy standards would not be achieved. the voluminous record before the Commission appears to be devoid of any real-world analysis of the impact of a moderate relaxation of the standards in the rural areas on the ability to actually locate a user in a sparse rural environment.

[34/] While this *ex parte* filing is admittedly more than two years old and certain advances in technology have no doubt occurred since that time. the underlying principles remain true. Moreover, despite these assumed increases in achievable accuracy, a I-to-1 overlay of a network-based solution using the existing antennasystems would remain the least costly alternative until such time as sufficient accuracy can be achieved with deploying *less* than a I-to-J overlay. TierIIICo doubts this is the case as it has been unable to find any network-based vendor that will contractually obligate itself to meeting the FCC accuracy requirements throughout a rural licensed service are3 from a network-based solution deployed at all existing rural cell sites using existing CMRS network antenna systems.

[35/] Letter to Ms. Magalie Roman Salas from Philip L. Verveer and David M. Don, July 24. 2000, at p.3.

TierIIICo specifically requests that the Commission forbear from enforcing its accuracy requirements. for an initial period tip to and including December 31, 2005, in the Instance where a wireless carrier. in a rural environment. deploys a nctwork-based solution using existing antenna systems at all existing sites that could be used to provide location service to the wireless carrier's licensed service area within a PSAP's area, in timely response to a PSAP request. Dunngthis period ot time, the wireless carrier would tile predicted accuracy maps for such service area, updated as additional cell sites are deployed. quarterly reports of all E911 location activity and, to the extent made available by the PSAP, the distance between the provided location and actual location ofthe 911 caller as well as time required to locate the 911 caller once the emergency personnel arrived at the location pi-ovided by the network-based solution. This information, gathered over the initial period during which this Forbearance was in affect. would provide valuable real-world information which the Commission could use to evaluate the real-world need toenforce more stringent location standards in rural environments. Moreover. TierIIICo respectfully submits that following this procedui-e would actually enhance public safety during this intenm period.

From the standpoint of an existing TDMA network provider, the inability to economically deploy a network-based solution which meets the Commission accuracy requirements. leaves no alternative but to utilize a handset-based solution. However, with the large-camer decision to migrate away trom 'I'DMA as a network protocol. TierIIICo has been unable to identify a single handset manufacturer that will provide an ALI-capable TDMA handset. **As** a result, the network equipment providers are not supporting handset-based solutions for TDMA either. Therefore, the only alternative is lor the TDMA carrier to overlay an entirely new digital network that is capable of using a handset based solution. Of course, that assumes that the handset-based solution will meet

the accuracy requirements in the rural setting (see discussion of the concerns relating to handset-based systems at Section III B. *infra*). Perhaps the worst scenario is where the rural camer spends the multi-million dollars needed to overlay such a system only to find that the ALI handset-compatible system still falls short of satisfying the FCC's accuracy requirements!

However, even where the ALI-compatible network protocol is overlaid, and even if the accuracy requirements were then achievable, the Commission must recognize that there would he absolutely no compatible handsets in the camer's network at that point in time! Indeed, the Commission's Rules already provide until December of 2005 for the ALI-capable handsets to be near-universally available in carriers' networks. Of course, even if that ubiquity within the home network did occur (an unlikely outcome recognized by the FCC in requiring that analog service continue to be supported by carriers for an additional 5 year period of time), there is absolutely no guaranty that any roamer would have the nght type of handset to receive any location service in any market but his or her own.

A further consideration is the delay that will result in implementing an ALI handset-compatible network strictly to meet E91 I needs in a rural application. Specifically. unlike urban deployincnts where the **PSAPs** have been making coordinated efforts to simultaneously deploy regional E911 Phase II compatible systems, rural PSAPs appear to be operating on far more individual schedules. Where rural markets primarily connect multiple large to mid size urban areas, rural PSAPs (unless they operate independently) are attempting to consolidate their deployments with regional PSAP operations. Unfortunately, individual PSAPs throughout the rural market are aligning with different regional PSAP networks. The net result is still a very sporadic deployment schedule.

Missouri RSA No. 7 Limited Paitnei-ship dba Mid-Missouri Cellular ("MMC"), a member of TierIIICo and the B Block cellular licensee in Missouri RSA 7 and a rural portion of the Kansas City Unserved area. is presently contending with the consequences of both regional PSAP consolidation coupled with uncoordinated PSAP rural deployment. MMC's service area includes portions of Ray County, which is part ofthe Kansas City MSA, even though the County is extremely rural. The Ray County PSAP is being integrated into the consolidated Kansas City metro E911 system. The regional selective router for this rural PSAP is located approximately 70 miles from the area of Ray County served by MMC.

MMC has a *total* subscriber count of approximately 100 customers in Ray County. Nevertheless, the Ray Countv PSAP has requested E911 Phase II service from MMC. Undercurrent Commission Rules. MMC would be obligated to beginprovidingsuch service in September of 2003. The onlv option currently available to MMC to meet this request requires overlaying a new digital system. Because no other PSAP has ti-iggered a Phase 11request anywhere else in the MMC's FCC-licensed service area. the multi-million dollar expense associated with a system-wide overbuild would be incurred solely to meet the Ray County PSAP request. Missouii has ***not*** implemented ***any*** cost-recovery mechanism for wireless E911. Accordingly, incurring a multi-million dollar digital overlav expenditure to support accuracy-compliant E911 Phase II service for 100 Ray County subscnher's would indisputably be "unduly burdensome". Accordingly. MMC has requested that Ray County withdraw its E911 Phase II request until such time as the balance of the **PSAPs** in MMC's market are ready to support E911 Phase II. A copy of MMC's request is appended hereto

as Appendix C. This letter represents MMC's first step in seeking relief. as outlined in the Commission's King County Order.[36]

MMC currently provides service to Ray County from two essentially omni-directional cell sites. A third MMC cell site. whose signal is insufficient to afford reliable cellular service in Ray County. can assist in providing triangulation to a portion of Ray County. Deploying a location-based network solution using existing antenna systems at these three existing rites will not achieve Section 20.18 accuracy throughout Ray County. While the cost of deploying a nerwork-based solution at these three cell sites will he substantial, it is a mere fraction of the cost of overlaying an entirely new digital network. A three cell site networkbased solution ***could*** be placed in service within the time frame allowed under the present rules, and would provide location service to ***all*** mobiles being served bv the MMC system in that area. independentofa handset's ALI capabilities (orlack thereof). No record data suggests that this level of economically achievable location accuracy would fail to result in meaningful improvements in real world public safety in Ray County, relative to the *status quo*. At the same time. MMC's present inability to economically deploy a Section 20.18(h) compliant solution at this time is beyond question. Assuming, *arguendo*, that MMC could deploy such a solution. the total lack of compatible handsets in the possession of the MMC subscribers. conclusively establishes that actual E911 locational service in Ray County would be deferred for a substantial period of time under the current rules. Accordingly, grant of the forbearance sought

---

[36] "Where our rules impose a disproportionate burden on a particular carrier, the carrier may work with the public safety entities involved to mitigate that burden and. if necessary, may seek individual relief from the Commission." *Order on Reconsideration, Revision of the Cornmission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Request of King County, Washington,* FCC 02-146, CC Docket No. 94-102. (rel. Julv 24. 2002), at paragraph 18.

hcrcin would actually speed the availability of E911 service in some of the most rural parts of the country.[37]

B. HANDSET-BASED PHASE II TECHNOLOGY

The handset-based option presents some of the same technical. operational and practical issues discussed in connection with network-based technology. In addition. handset tcchnology has its own unique set of concerns (or Tier III carriers that reflect the particular engineering and manufacturing charactenstics associated with ALI-capable handsets.

1. Tier III TDMA Carriers

Particularly unfortunate is the dilemma facing Tier III camers whose systems operate with the TDMA air interface. Manv carriers initially selected this protocol to maintain network compatibility with their principal roaming partners. Cingular Wireless and/or AT&T Wireless. Approximately eighteen (1 8) months ago. Cingular and AT&T made public their decision to phase out [heir TDMA networks in favor of alternate digital technologies. Responding to this decision. all major handset manufacturers abandoned efforts to develop TDMA-compatible. ALI-capable handsets.[38] As a result. TDMA-based Tier III carriers cannot satisfy their Phase II E911 obligation with handset technology. unless they incur the enormous expense of retrofitting their networks with an entirely new digital protocol. Having made the vast cost-commitment and endured the

---

[37] Significantly, the MMC example is offered for illustrative purposes only. Additional members of TierIIICo are in the same situation and will be seeking relief from deployment obligations from the isolated PSAPs that have requested E911 Phase II service and/or the FCC. Denial of the requested forbearance will only result in a flood of piecemeal waiver requests and will not avoid the need for the Commission to consider the merits set forth herein.

[38] *See* Dobson Cellular Svstems, Inc. Petition For Waiver Of Sections 20.18(e), (f0 and (h) Of The Commission's Rules (CC Docket No. 94-102), filed September 4, 2001, pp. 13-14, n. 32.